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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,152	05/24/2001	Gerald T. Mearini	ADV08 01008	2816

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EXAMINER

CHEN, BRET P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,152

Applicant(s)

MEARINI ET AL.

Examiner

B. Chen

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-26 are pending in this application. Newly added claims 20-26 are noted.

Election/Restrictions

Applicant's election of Group I, claims 1-17, 19-26 in the reply filed on 3/18/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim 18 is withdrawn from consideration as being directed to a nonelected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 1, the step of "adjusting the intrinsic stress via deposition parameter modification" is deemed nonenabling because the specification does not enable one skilled in the art to determine how one should adjust the intrinsic stress. The same issue applies to claims 2, 4, 9. Clarification and appropriate amendments are requested.

Art Unit: 1762

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 20, the terms “relatively high index of refraction material” and “relatively low index of refraction material” is deemed vague and indefinite as to what it is referring to. It is not clear, for example, whether the relatively high index material is high relative to the low index material, the amorphous carbon layer, the filter material, or the substrate. Clarification and appropriate amendments are requested.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fairbairn et al. (6,573,030) or Klocek et al. (6,160,661). Fairbairn discloses a method of forming an integrated circuit using an amorphous carbon film for use as anti-reflective coatings (col.2 lines 37-55). Specifically, Fairbairn teaches a multi-layer amorphous carbon anti-reflective coating by depositing a first amorphous carbon layer having an index of refraction in the range of about 1.5 to about 1.9 followed by a second amorphous carbon layer having an index of refraction of about 1.5 to about 1.9 (col.3 lines 23-35). The refractive index can be varied in the desired range as a function of the temperature and composition of the gas mixture during layer formation (col.3 lines 35-47).

Klocek discloses a method of forming an infrared transmissive protective window which comprises a layer of gallium phosphide 22 (col.1 lines 14-17) in which the substrate 18 can be gallium arsenide, zinc sulfide, germanium, or zinc selenide (col.2 lines 4-6). In one embodiment, the anti-reflective layer 26 may comprise alternating layers of silicon and amorphous carbon (col.4 lines 6-17).

However both references remain silent on making an optical filter. It is noted that the above references specifically teach of anti-reflective layers. It is well known to one skilled in the art that anti-reflective layers are used in optical filters. The skilled artisan would reasonably expect that the method of forming the anti-reflective layers can be utilized to form the optical filters. It would have been obvious to one skilled in the art to utilize the methods of Fairbairn and Klocek to form an optical filter with the expectation of obtaining similar results.

The limitations of claims 21-26 have been addressed above.

Allowable Subject Matter

Claims 1-17, 19 are allowed over the prior art.

Response to Arguments

Applicant's arguments filed 3/18/04 have been fully considered but they are not persuasive.

Applicant first argues that the parameters affecting the intrinsic stress during filter fabrication are well known in the art (p.9).

The examiner does not take issue with the above statement. However, the issue is not what parameters affect intrinsic stress or that the intrinsic stress can be varied at all. Rather the issue is how and when the intrinsic stress is varied. For example, if one skilled in the art performed the claimed invention by monitoring the layer growth, the RHEED, the sub-angstrom resolution as well as the intrinsic stress, in which direction is the intrinsic stress adjusted due to the results of all the monitoring? Does one increase it or decrease it? The specification does not appear to provide any guidance as to how the skilled artisan would reasonably know what to do.

Applicant's arguments have been considered but are not deemed persuasive.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 1762

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Chen whose telephone number is (571) 272-1417. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bc
6/28/04



BRET CHEN
PRIMARY EXAMINER